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THE NEOTROPICAL SPECIES OF *MELANOSTOMA* AND ALLIES (SYRPHIDAE: DIPTERA)

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A study of the Neotropical material belonging to *Melanostoma* Schiner and allied genera necessitates a realignment of the species formerly placed in this genus. Most of the forms belong in the genus *Rhysops* Williston, only four belonging, with certainty, to *Melanostoma*. As a key to the species of *Xanthandrus* Verrall will be published elsewhere by Dr. C. L. Fluke, I do not include one in this contribution.

TABLE OF GENERA

1.—Antennae elongate, the second segment longer than wide, the first and third also elongate..... *Rhysops* Williston.

Antennae shorter, the second segment short and wider than long.....2.

2.—Face rather narrow and narrowed below; abdomen broad and flattened. *Xanthandrus* Verrall.

Face at most with parallel sides or widened below, abdomen narrower. *Melanostoma* Schiner.

RHYSOPS WILLISTON

WILLISTON, 1907, Journal N. Y. Ent. Soc., XV, p. 2.
Braziliana CURRAN, 1925, Ann. Mag. Nat. Hist., XVI, p. 252.

Rhysops was established by Williston for three species he had previously placed in *Melanostoma* Schiner, characterized by their elongate antennae and the presence of transverse grooves across the middle of the face. In 1910 Coquillett selected *rugonasus* Williston as the genotype. *Braziliana* was proposed in 1925 for *Melanostoma longicornis* Williston, a species having elongate antennae but lacking the transverse facial grooves.

A study of the material now before me shows that the differences between these two groups are not of generic value and it becomes necessary to revise my earlier view. I do not doubt that *Rhysops* can be maintained as distinct from *Melanostoma* Schiner although the dividing line is not as well marked as one would like to have it. However, I have found no specimens of *Melanostoma* in which the second antennal segment is longer than wide and there seems to be no intergradation in this respect.

TABLE OF SPECIES

1.—First antennal segment as long as the second and third segments combined....6.
Third segment about as long as the first or as the first two combined.....2.
2.—First and third antennal segments of equal length, the face without transverse ridges.....*catabomba* Williston.
Third segment as long as the basal two combined.....3.
3.—Wings with two short, transverse spots in front on the median half.
scitula Williston.
Wings without such markings.....4.
4.—At least the middle tarsi wholly brownish yellow or reddish.....5.
Tarsi black with the basal segments reddish yellow (Costa Rica).
melanocera Williston.
5.—Face with five transverse grooves across the middle (Mexico).
rugonasus Williston.
Face without distinct transverse grooves (Brazil).....*lanei* Fluke.
6.—Face with three or four transverse grooves across the middle above the tubercle; wings with two short, narrow transverse brown bands near the middle on the anterior half (Mexico).....*crenulata* Williston.
Face with at most one groove above the tubercle, wings without transverse bands but with weak apical cloud in front.....7.
7.—Anterior legs wholly yellowish (Peru).....*peruviana* Shannon.
Anterior femora black on basal third or more (Brazil, Colombia).
longicornis Williston.

MELANOSTOMA SCHINER

1.—Pollen of the face with numerous small shining black spots (Chile, Argentina, Southern Brazil).....*punctulatum* Wulp.
Pollen without such spots.....2.
2.—Anterior four femora wholly reddish (Brazil).....*tropicum*, new species.
Anterior four femora broadly black basally or almost all black.....3.
3.—Face perpendicular (Brazil).....*neotropicum*, new species.
Face produced forward below (Chile).....*fenestratum* Macquart.

The species *annuliferum* Bigot and *bellum* Giglio-Tos are unknown to me and I am unable to place them. *M. anthracoides* Bigot, from Panama, belongs to the genus *Baccha*. *M. euceratum* Bigot, from Mexico, belongs to *Xanthandrus*.

Melanostoma punctulatum Wulp

WULP, 1888, Tijd. v. Ent., XXXI, p. 375.

This species has been placed as a synonym of *stegnum* Say. It is a very different insect. The wide geographical separation of the two species will serve for ready identification.

Two specimens from Chile and four from São Paulo, Brazil (J. Lane).

Melanostoma fenestratum Macquart

Syrphus fenestratus MACQUART, 1842, 'Dipt. Exot.,' II, pt. 2, p. 103 (f.).

There seems to be no excuse for the placing of this species as a synonym of *stegnum* Say. The facial pollen is not at all punctate and the profile is quite different. The species appears to be common in Chile and is well represented in our collection.

Melanostoma tropicum, new species

Black; abdomen with three pairs of reddish spots; legs reddish, the hind pair mostly brown. Length 10 mm.

MALE.—Face almost perpendicular, the tubercle low but distinct, narrowly separated from the anterior oral margin; sides of the face thickly cinereous yellow pollinose, the median fifth shining black and not at all ridged or grooved; pile pale yellowish. Frontal triangle brownish yellow pollinose with a shining, roughened area above the antennae; pile black. Vertical triangle thinly brownish pollinose and blackish pilose. Occiput and cheeks cinereous pollinose, the pile whitish, the upper occipital cilia fine and black. Antennae reddish, the third segment brown above and apically; arista brown; third antennal segment one-half longer than wide as long as the basal two segments combined; antennae reaching to a little below the middle of the face.

Thorax shining aeneous; mesonotum with a pair of very broad, narrowly separated pale pollinose vittae in the middle on the anterior half and in some lights with thin brownish pollen; pleura mostly thinly grayish brown pollinose. Pile tawny, paler on the pleura.

Legs reddish, the coxae mostly black; posterior legs brown, their femora reddish on almost the basal half; pile reddish, black on the brown portions and on the apical segments of the tarsi.

Wings cinereous hyaline with luteous tinge; stigma luteous. Squamae with brown border and fringe. Halteres orange.

Abdomen black with three pairs of reddish spots. First segment shining with the sides and anterior border obscurely reddish, second segment opaque black with the lateral sixth reddish, the apical seventh less clearly so. Third segment opaque black with the pale spots extending from the base to the apical fourth, gently tapering posteriorly and broadly separated from the lateral margins by a sub-shining stripe; the reddish spots on the fourth segment extend to the apical third and the posterior margin is broadly sub-shining; fifth segment very short and wholly shining. Pile short and black, long and yellowish on the sides of the first two and basal half of the third segment. Venter metallic brownish red with mostly black pile. Genitalia mostly brownish red and with thin yellowish brown pollen. The abdomen is long and slightly spatulate, being narrowest at the end of the second segment and widest at the end of the third.

TYPES.—Holotype, male, and paratype, male, C. do Jardão, São Paulo, Brazil, January 23, 1936 (F. Lane).

Melanostoma neotropicum, new species

Somewhat similar to *tropicum* Curran but the abdomen has parallel sides and the legs are mostly black. Length, 9.5 mm.

MALE.—Head black, cinereous pollinose, a wide facial vitta, an arched spot above the antennae and the vertical triangle bare; frontal pollen yellowish brown except along the orbits; pile white, black on the front, vertical triangle and along the middle of the upper half of the sides of the face. Face almost perpendicular in profile, the tubercle very low and narrowly separated from the oral margin; above the tubercle with three broad, low, transverse ridges. Antennae short, brown, second segment very broadly reddish below, the third broadly reddish below on the basal half or more; arista brown.

Thorax shining greenish black; mesonotum in front with a pair of narrowly separated grayish vittae extending to the middle; pleura thinly cinereous pollinose. Pile pale tawny, moderately short, paler on the pleura, and longer on the scutellum.

Legs black, the narrow apices of the femora and broad bases of the tibiae reddish, the posterior tibiae more brownish red basally. Pile mostly short and black.

Wings cinereous hyaline, with luteous tinge; stigma luteous; anterior crossvein weakly clouded with brown. Squamae with brown border and fringe. Halteres reddish yellow.

Abdomen opaque black with three pairs of yellow spots, the first segment and sides of the abdomen shining. The yellow spots on the second segment are long and narrow, beginning at the basal fifth of the segment and extending to the apical fourth, broadly separated from the lateral margins. The spots on the third segment are broader, about twice as long as wide, broadly separated from each other and from the lateral margins, with almost parallel sides, obtusely rounded posteriorly and extending from the base to the apical third of the segment. The spots on the fourth segment are of the same width as those on the third but are less distinct and do not reach the middle of the segment. Pile short and black, longer and yellow on the sides of the first two segments and on the yellow spots, pale on the sides of the basal half of the third segment; fourth segment sub-opaque, the fifth very short and shining. Venter black with the third sternite yellow on more than the basal half. Genitalia black.

HOLOTYPE.—Male, São Paulo, Brazil, 1935 (A. A. Barbiellini).